

Liquid crystal-alignment agent where uniform liquid alignment of liquid crystals is effectively manifested by the irradiation with light over the liquid crystal alignment film without rubbing treatment of the liquid crystal alignment film thereof, and further manifests liquid crystal alignment with high stability and high light resistance, liquid crystals device with the use of said alignment agent and the method of the liquid crystal alignment by the use of said liquid crystal alignment agent.

Constitution

Liquid crystal alignment agent where polymer compound having bonds shown in the general formula (1) - (7) below

wherein R1, R2 and R3 are independently of each other hydrogen, alkyl,



substituted alkyl, aryl or propargyl; in the polymer compound thereof with number-average molecular weight of 1,000 – 300,000, and said bond makes the direct bond with either divalent or trivalent aromatic group at the both ends of said bond or with divalent or trivalent aromatic group making the direct bond at one end while at the other forming the direct bond with divalent or trivalent alicyclic hydrocarbon group, liquid crystal device by the use of said liquid crystal alignment agent and the method of the liquid crystal alignment by the use of said liquid crystal alignment agent.